

FIG. 1

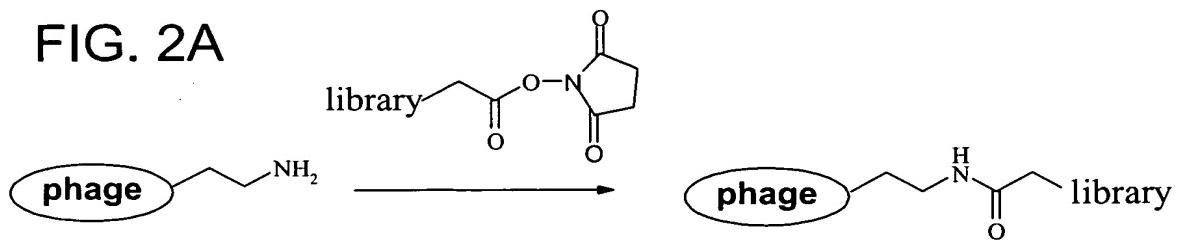
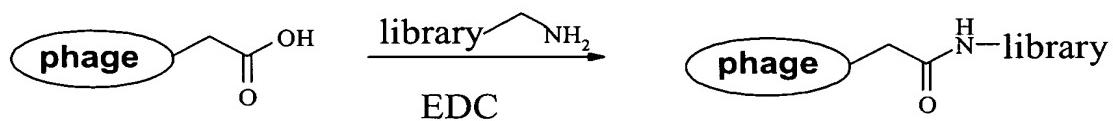
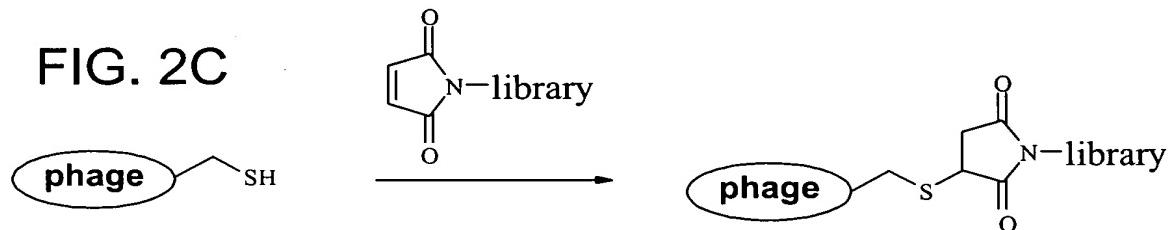
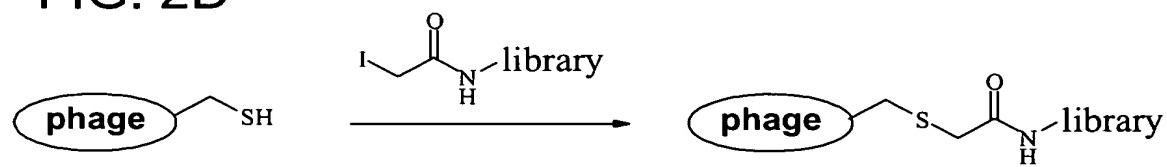
**FIG. 2A****FIG. 2B****FIG. 2C****FIG. 2D**

FIG. 3A

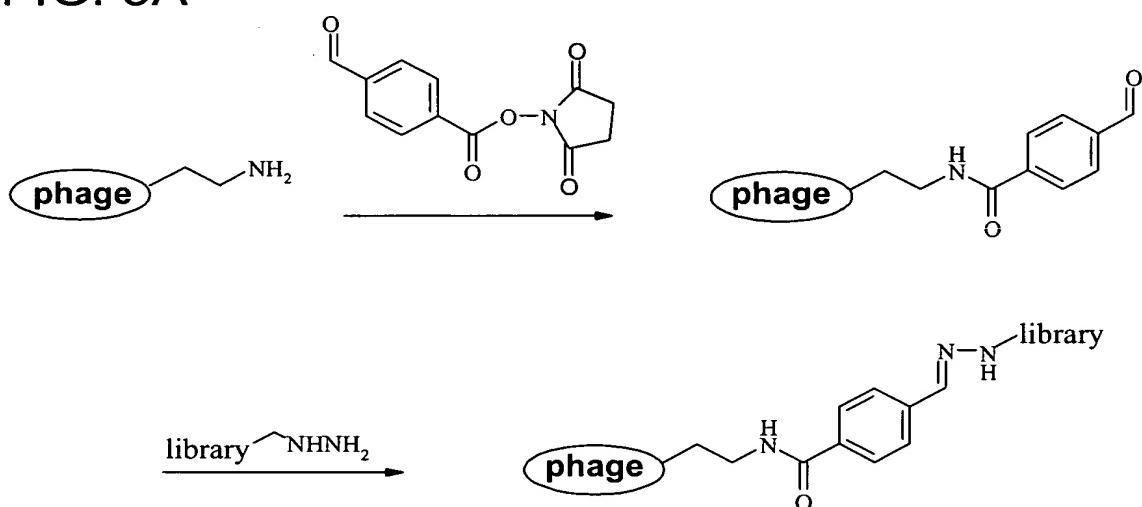
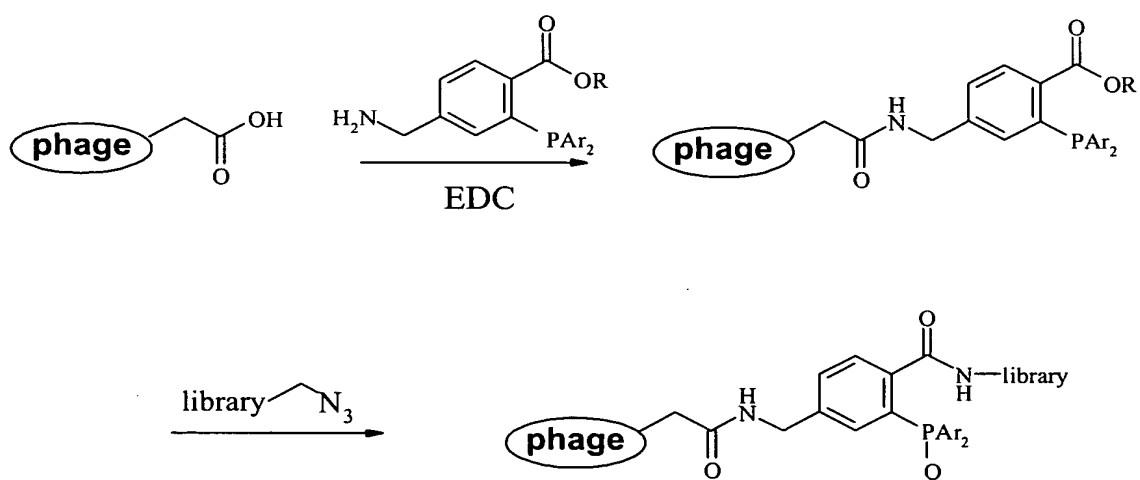


FIG. 3B



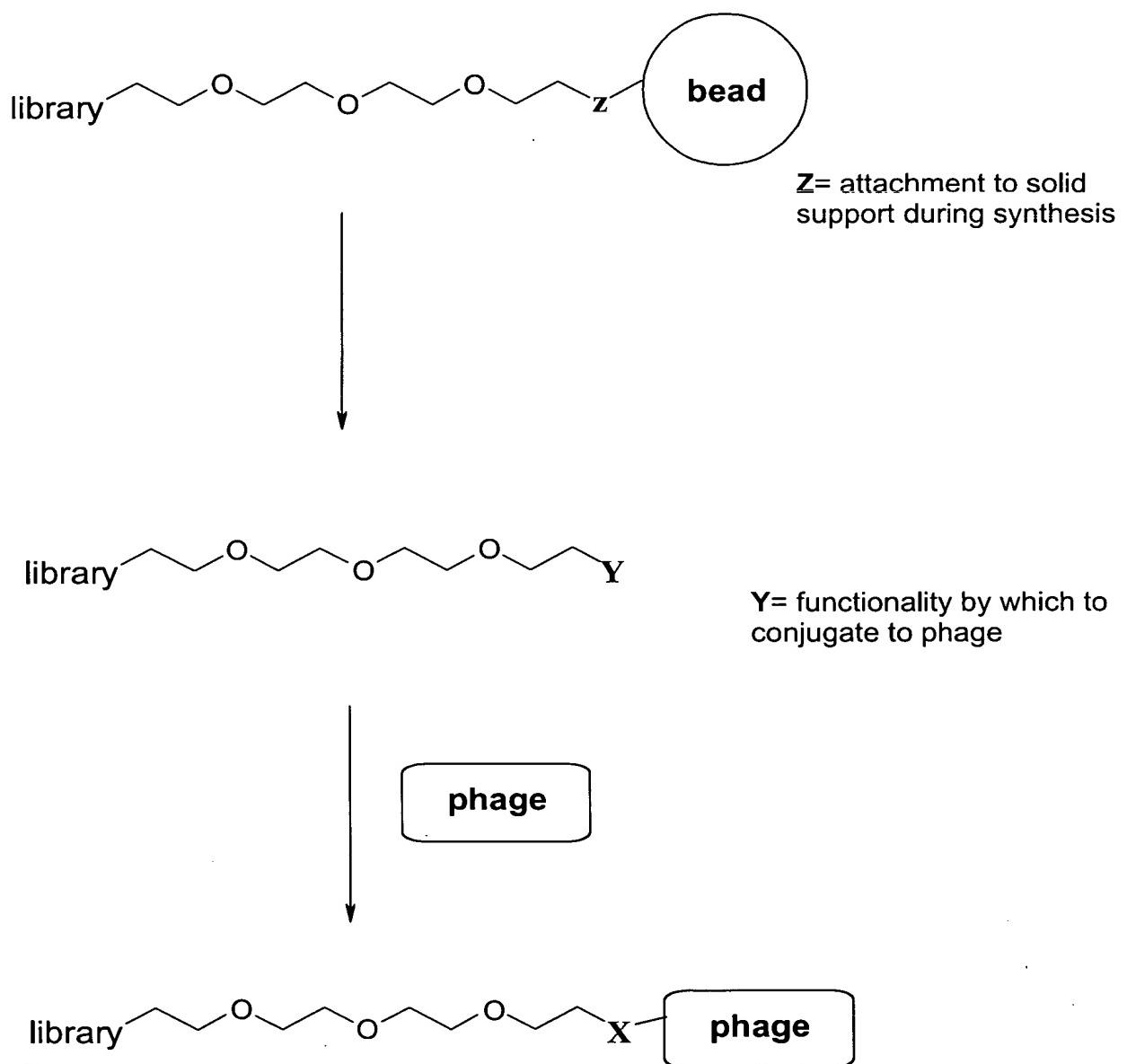


FIG. 4

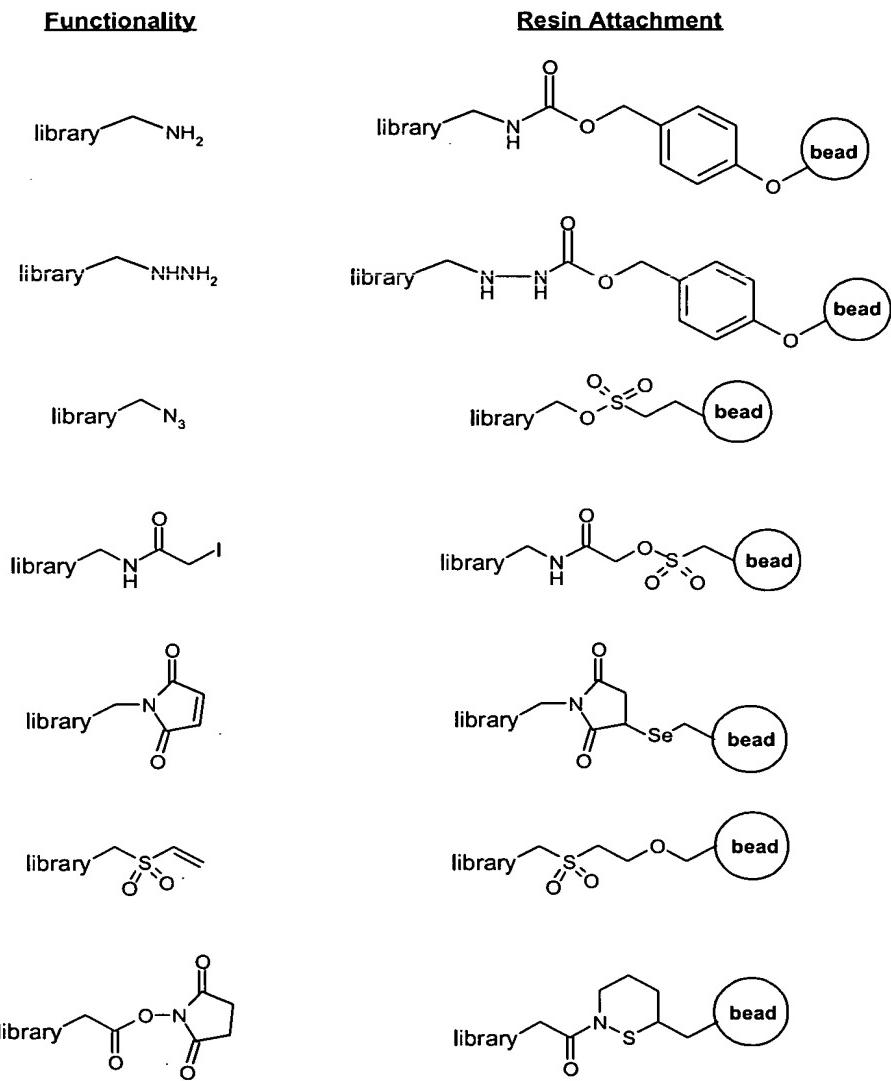


FIG. 5

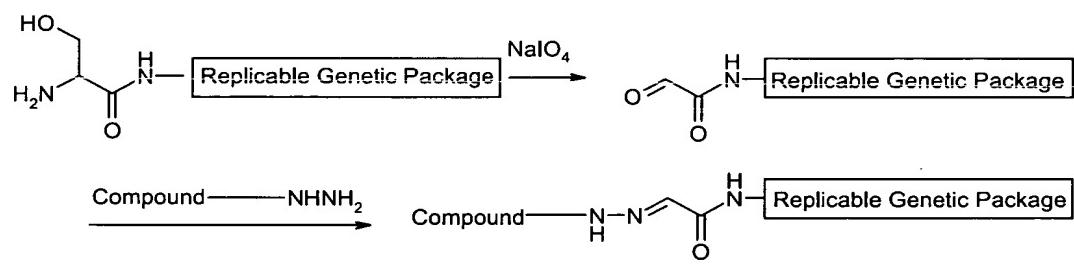


FIG. 6

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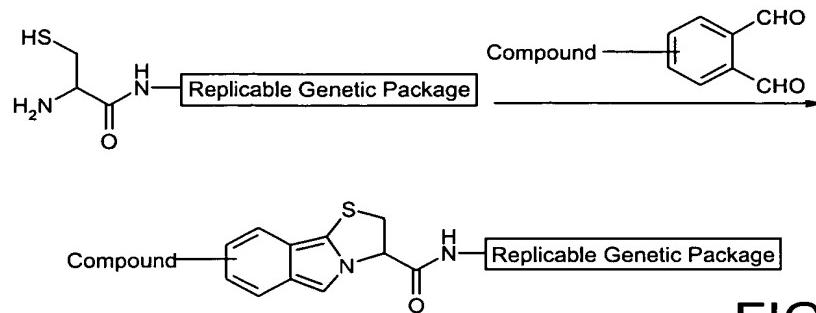


FIG. 7A

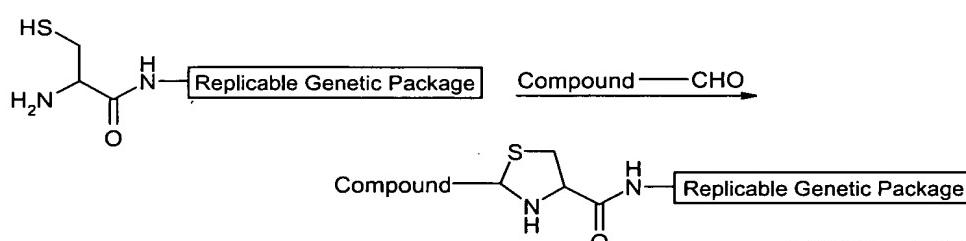


FIG. 7B

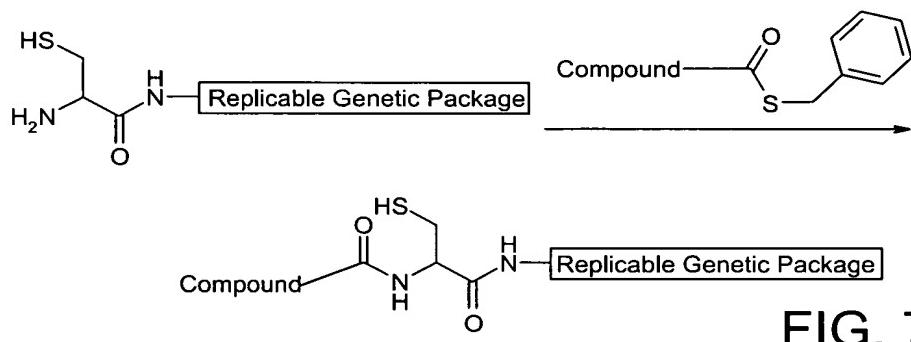


FIG. 7C

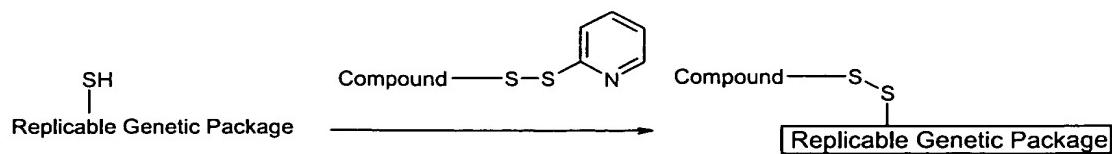


FIG. 7D

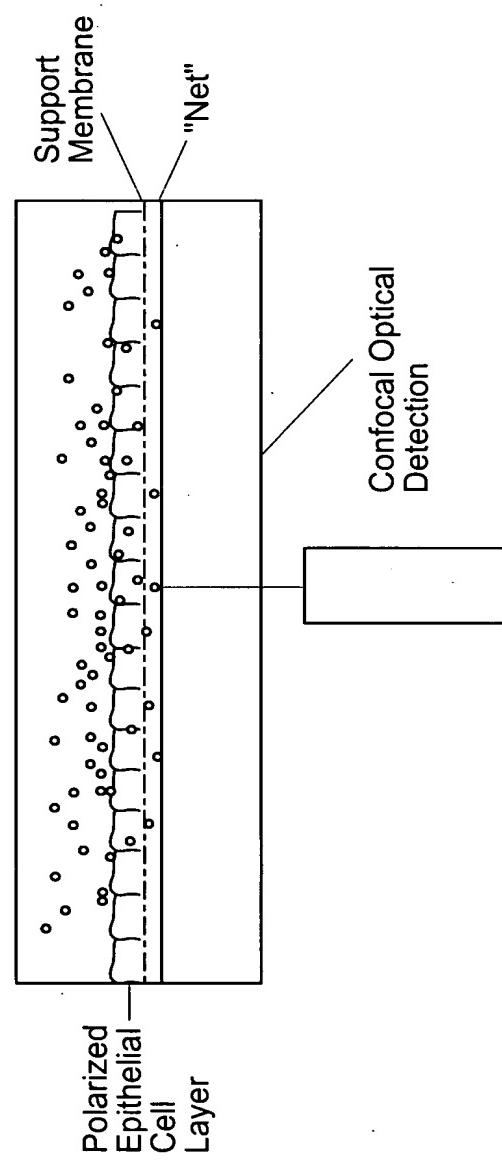


FIG. 8

Filamentous phagemid display (gene VIII)

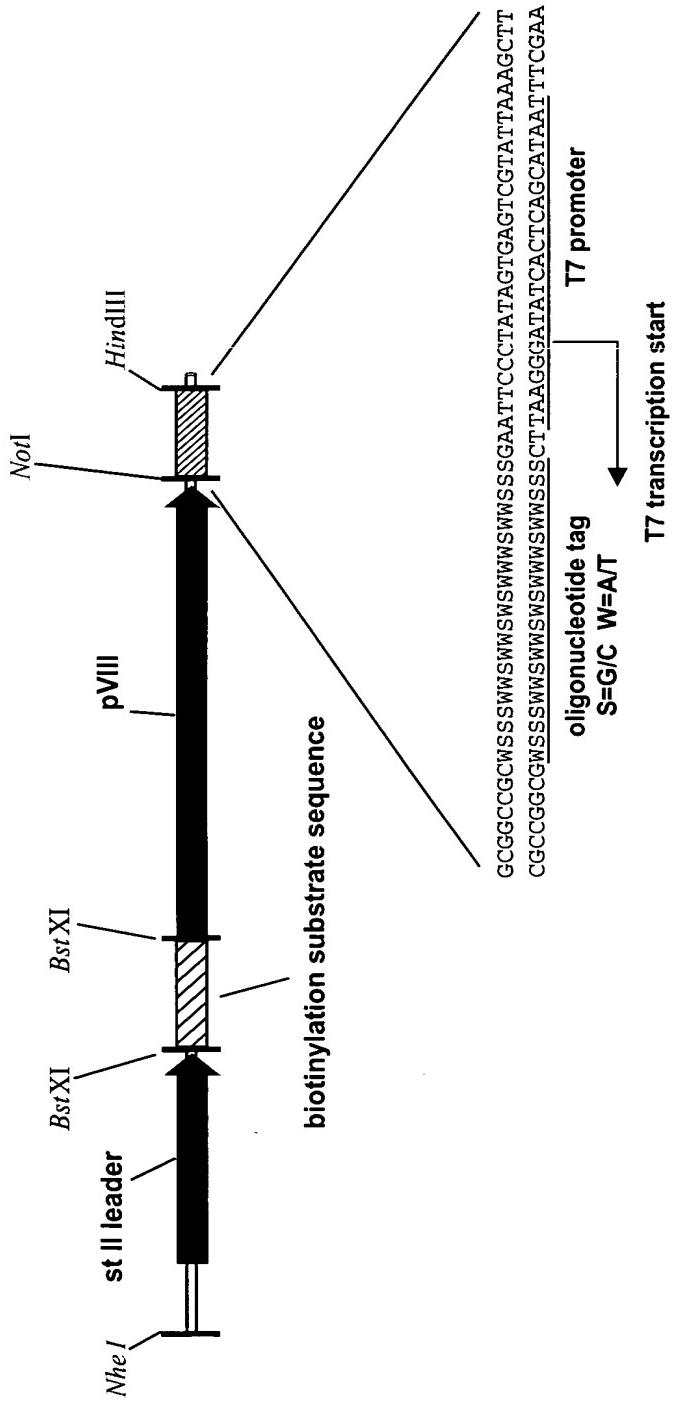


FIG. 9

## Filamentous phagemid display (gene VIII)

G G L N D I F E A Q K I E W H E G G G S  
GGGGGGGCTTAATGATAATTGGAGGTCTAGAAAGATTGAGTGGCATGAGGGAGGGGGGGTAGC . . gene 8  
 biotinylation substrate sequence      flexible spacer  
 biotin

FIG. 10A

T7 display (gene 10B)

gene 10B . . AATTCTGGAGGCCGGGGGTCTTAATGATATTTGGGCTCAGAAAGATTGAGTGGCATGAGTAACCTAA  
 spacer            biotinylation substrate sequence  
 biotin

FIG. 10B

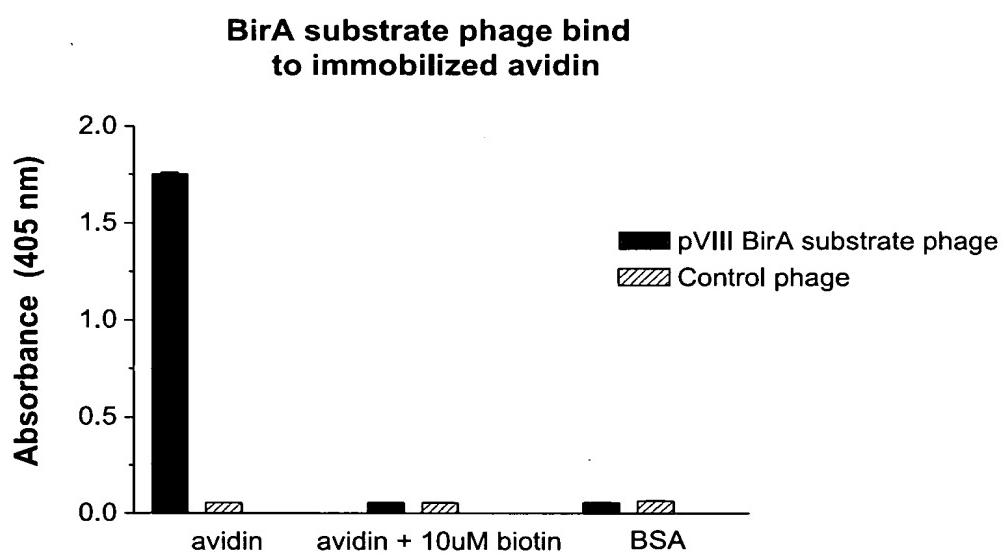


FIG. 11

## T7 display (gene 10B)

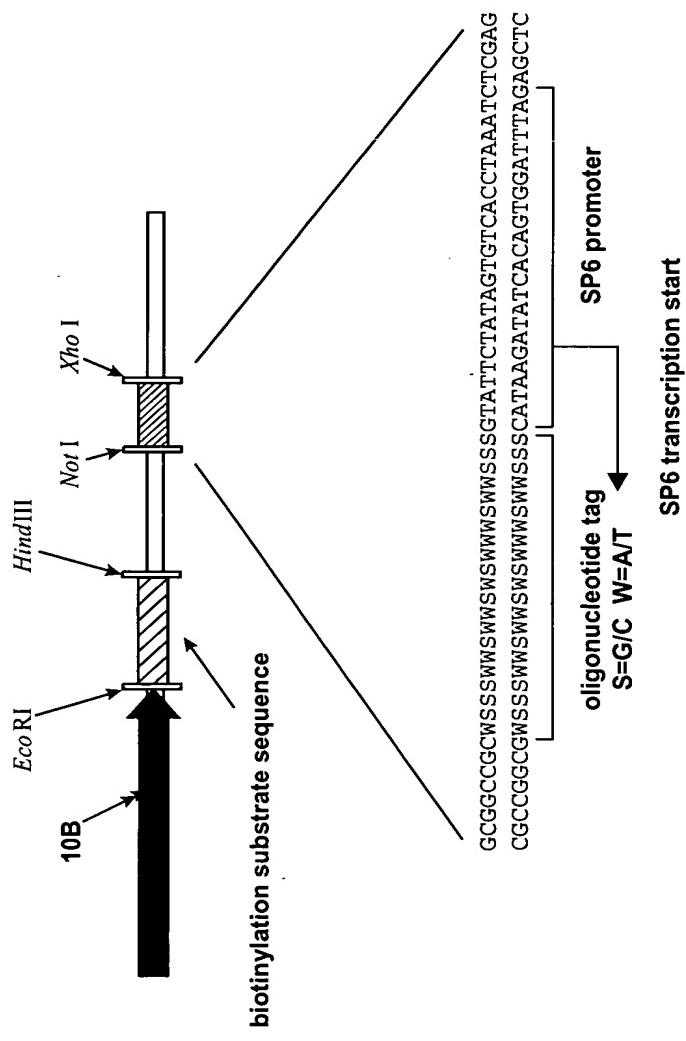


FIG. 12

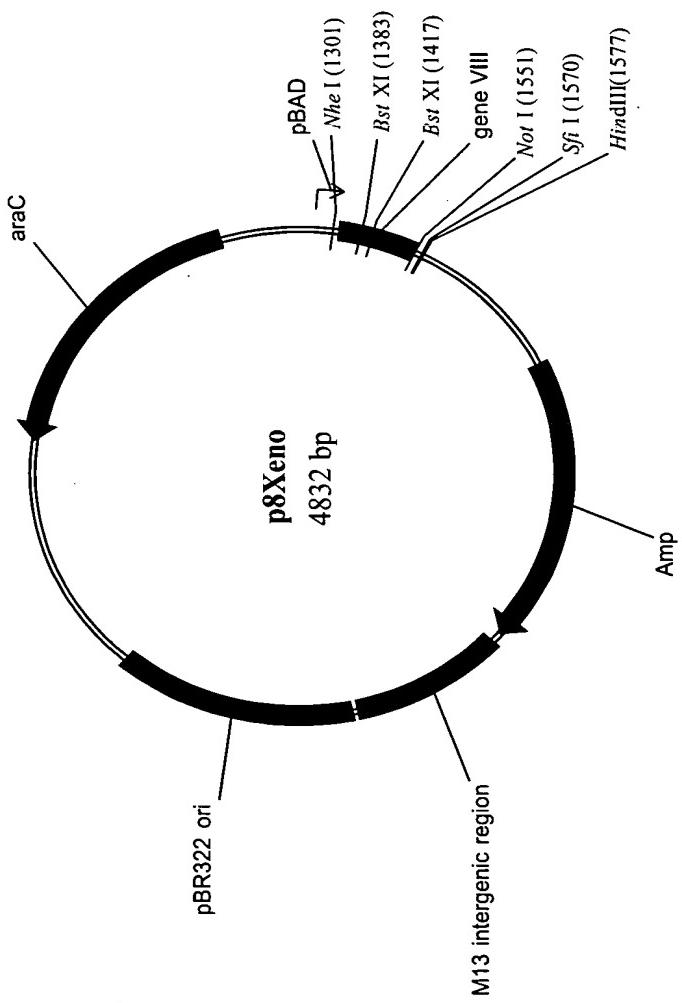


FIG. 13

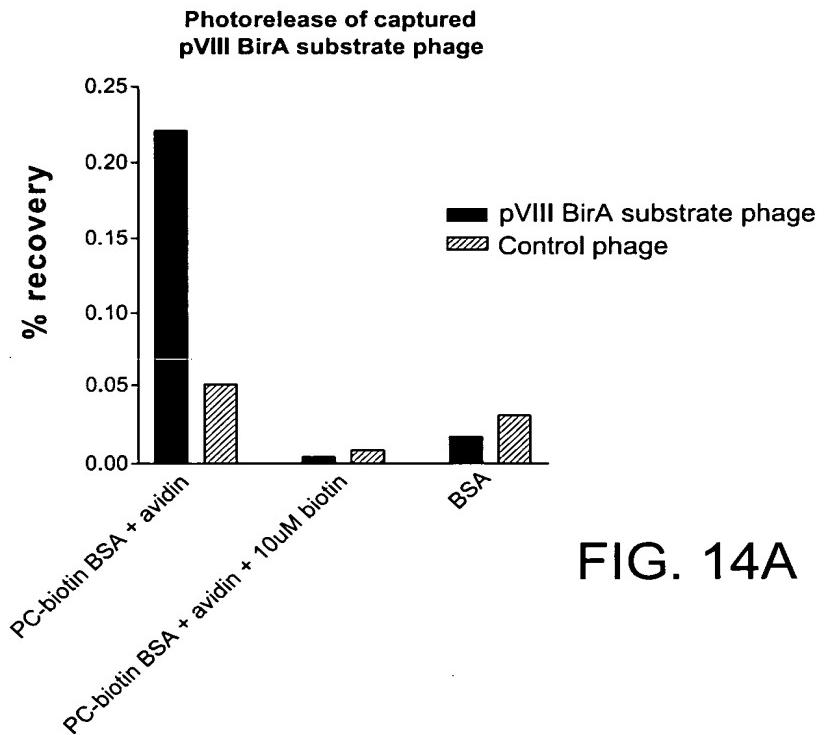


FIG. 14A

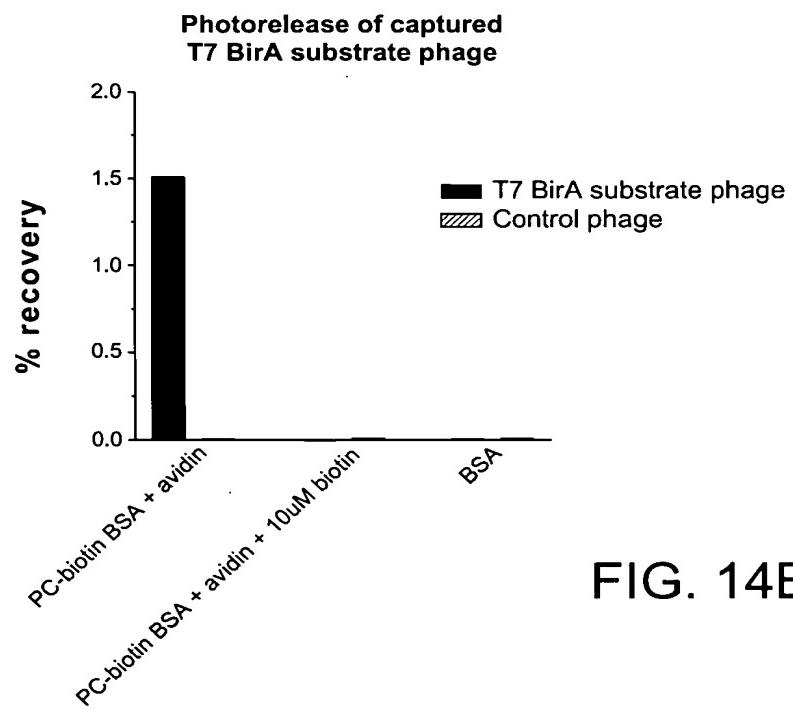


FIG. 14B

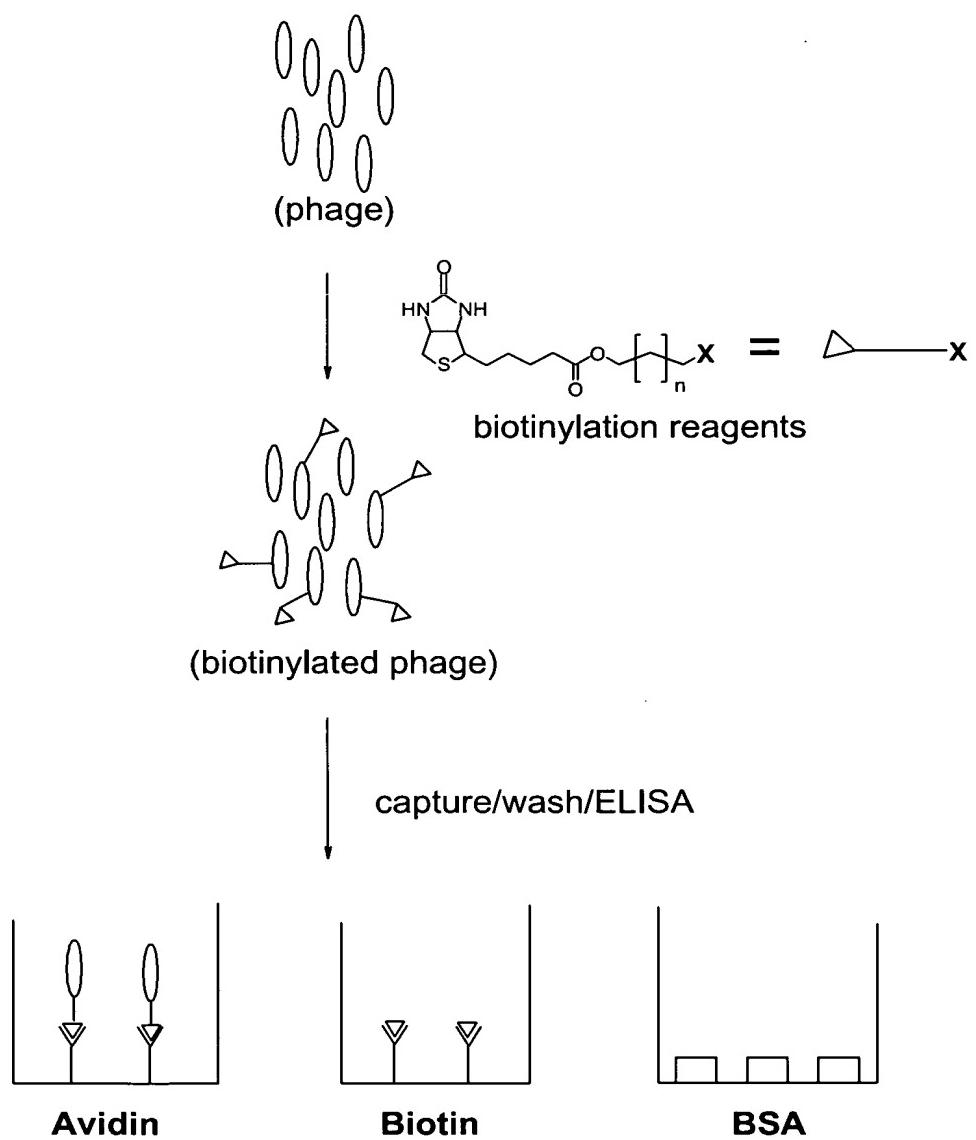
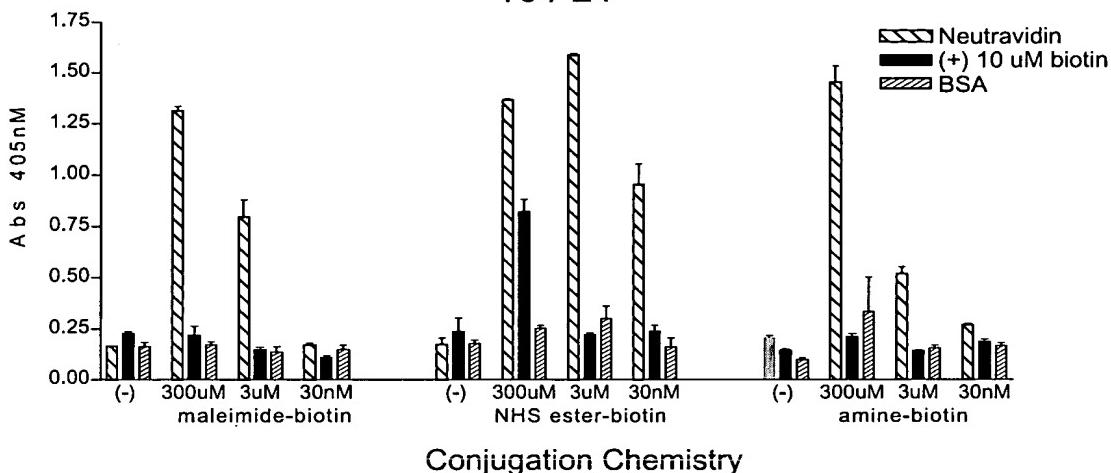
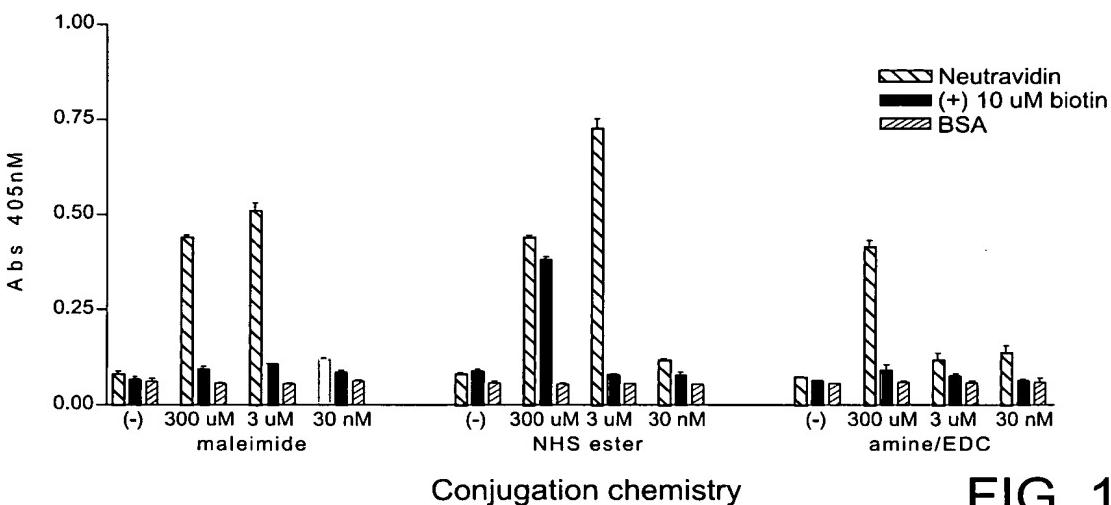


FIG. 15

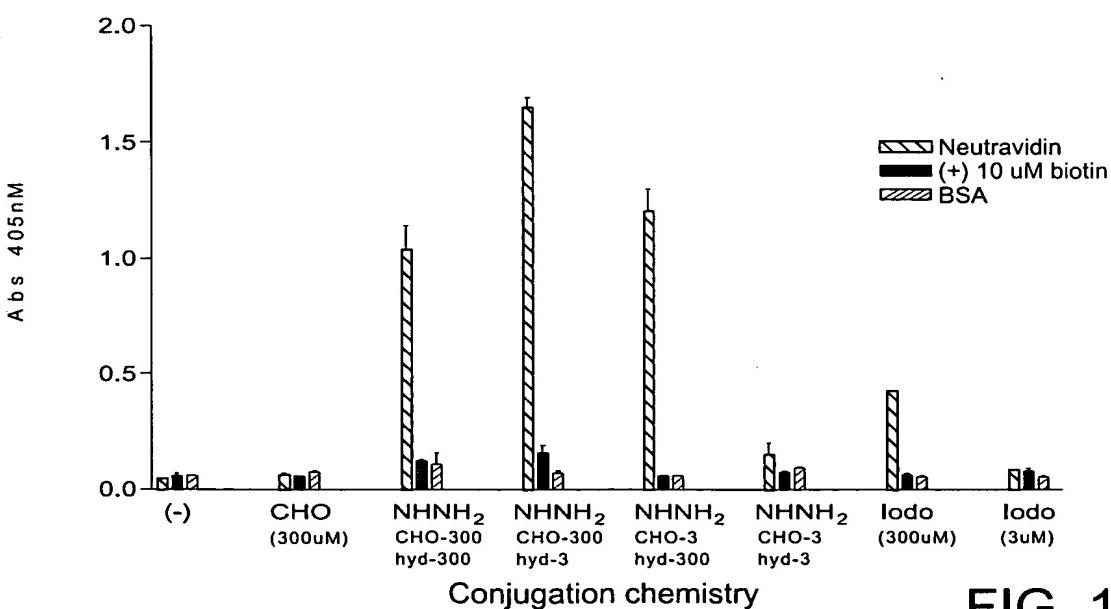


Conjugation Chemistry



Conjugation chemistry

FIG. 16B



Conjugation chemistry

FIG. 16C

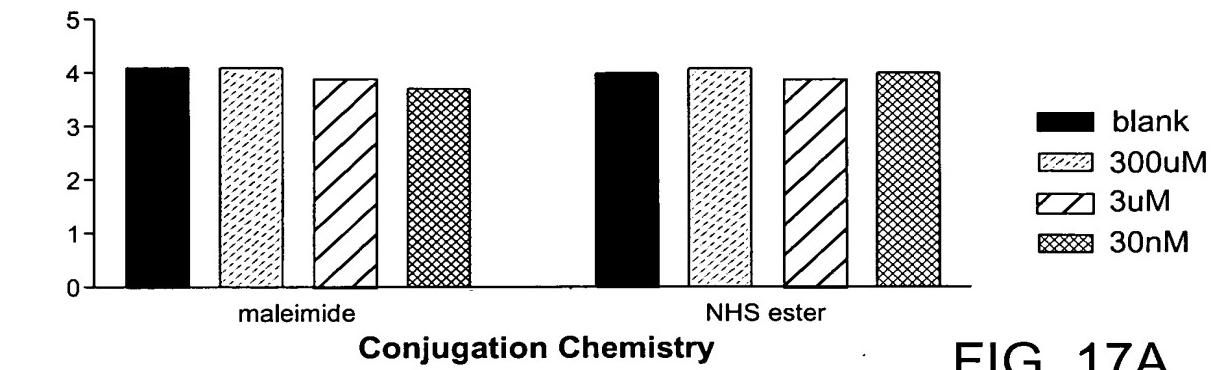


FIG. 17A

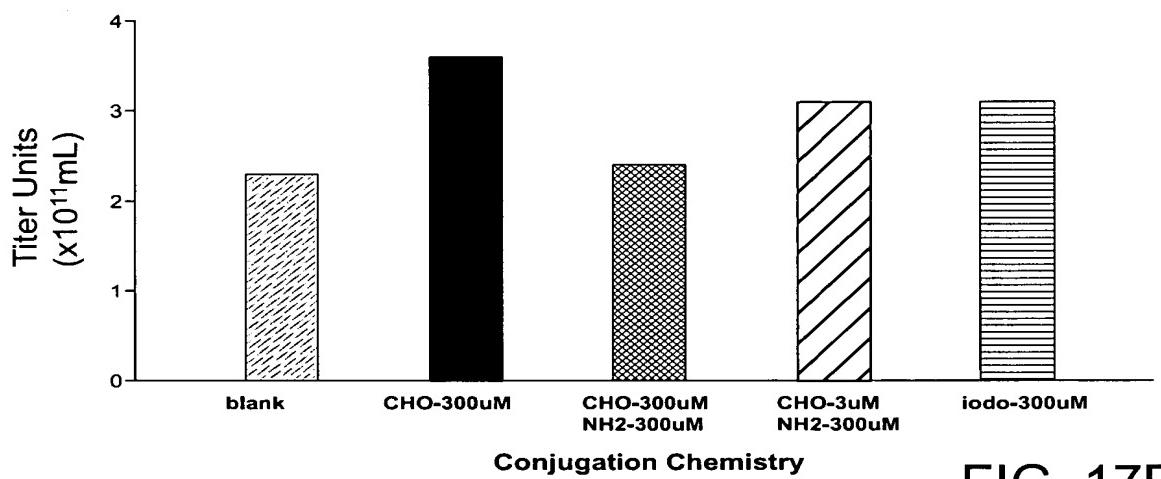


FIG. 17B

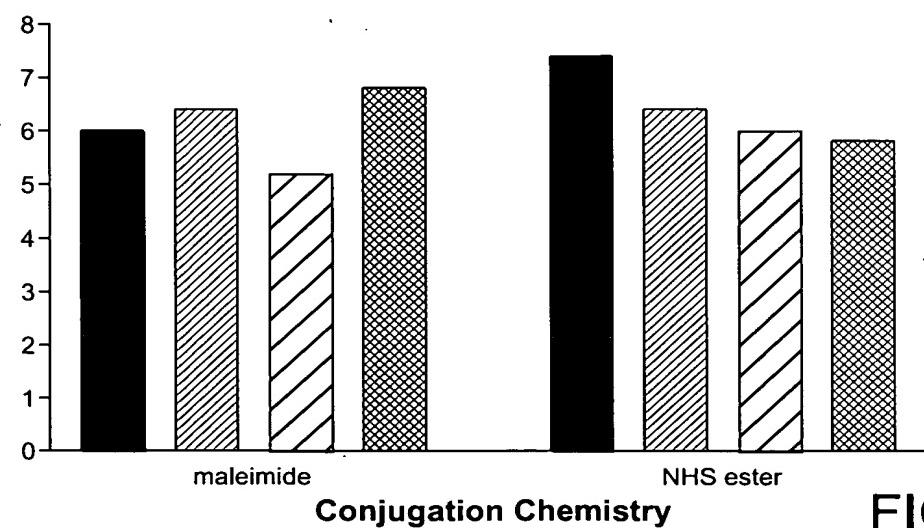
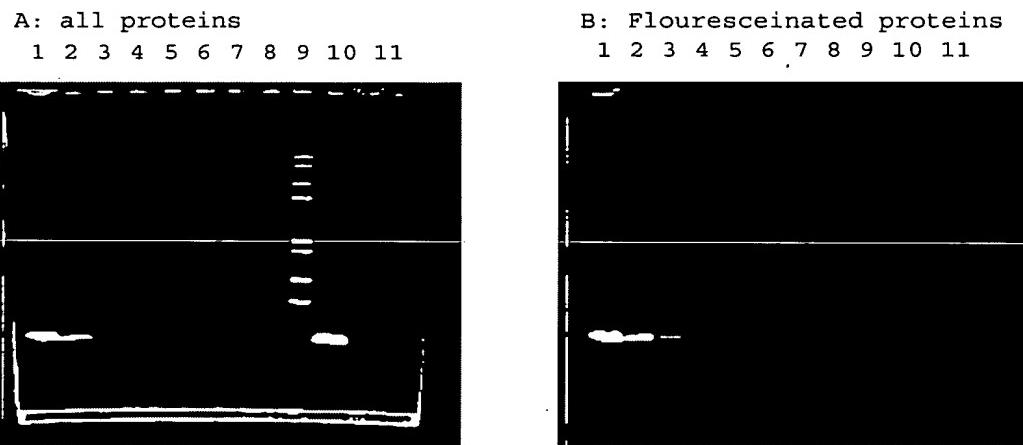
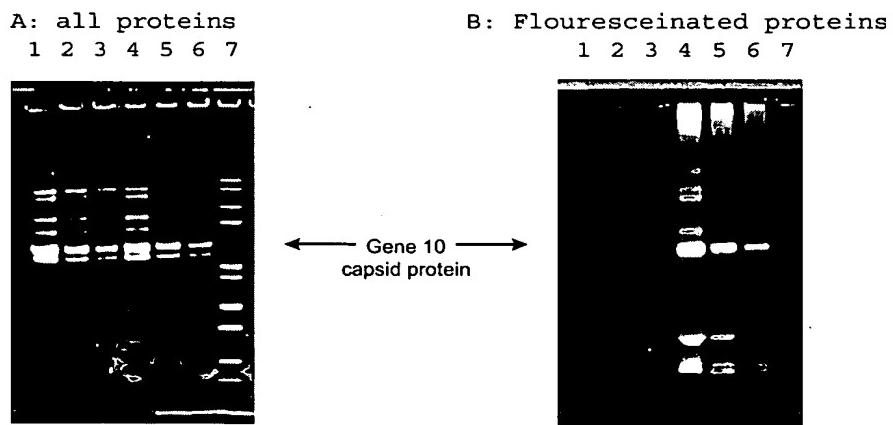


FIG. 17C

**FIG. 18**

Lanes 1-8: Fd phage treated with fluorescein-NHS ester (2X dilutions)  
 Lane 9: MW markers  
 Lanes 10-11: Fd phage treated with fluorescein-CO<sub>2</sub>H (10X dilution)

**FIG. 19**

Lanes 1-3: T7 phage treated with fluorescein-CO<sub>2</sub>H (2X dilutions)  
 Lanes 4-6: T7 phage treated with fluorescein-NHS ester (2X dilutions)  
 Lane 7: MW markers

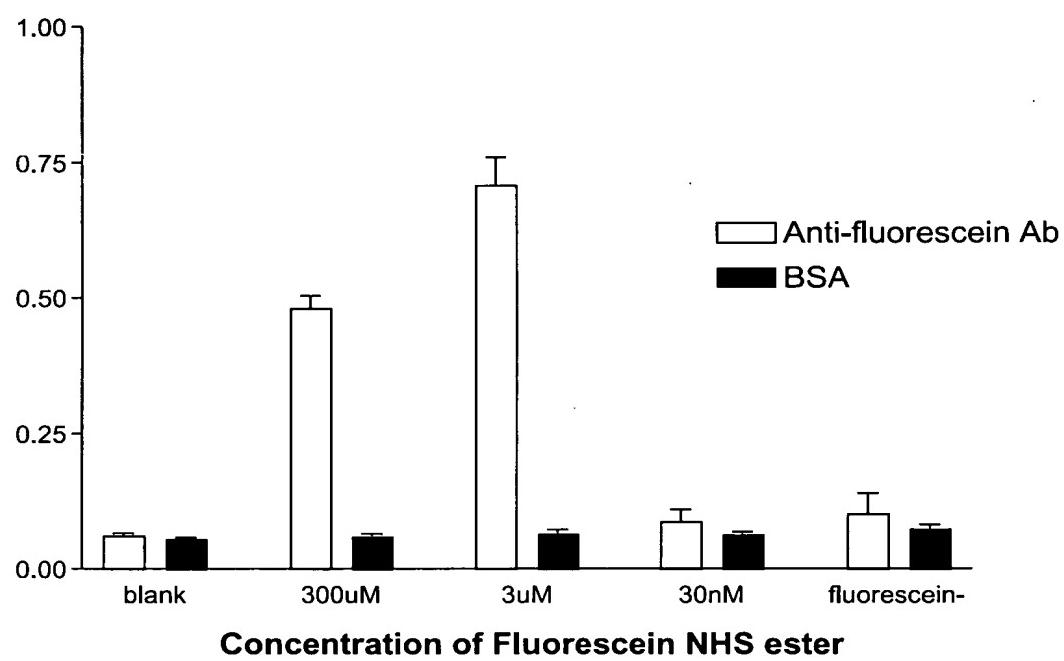


FIG. 20

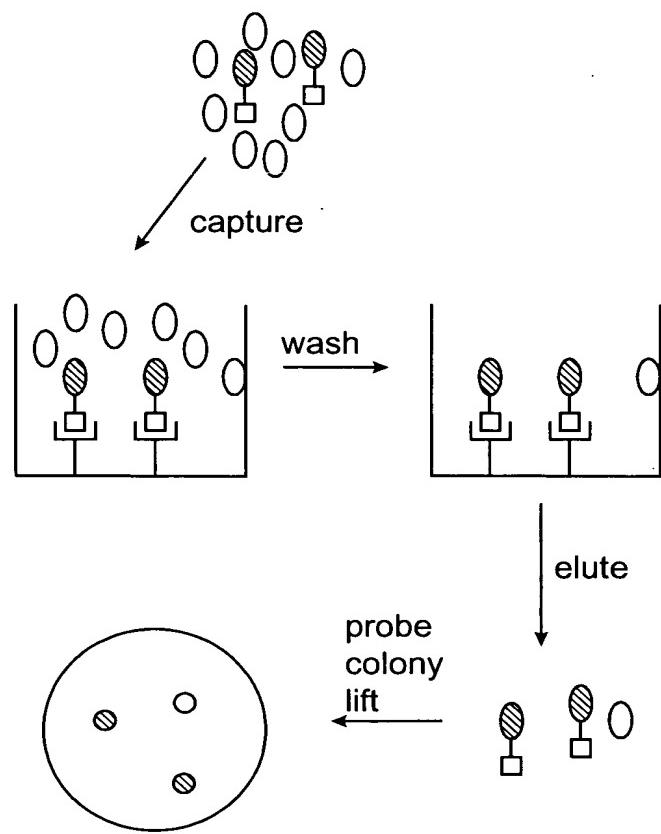


FIG. 21

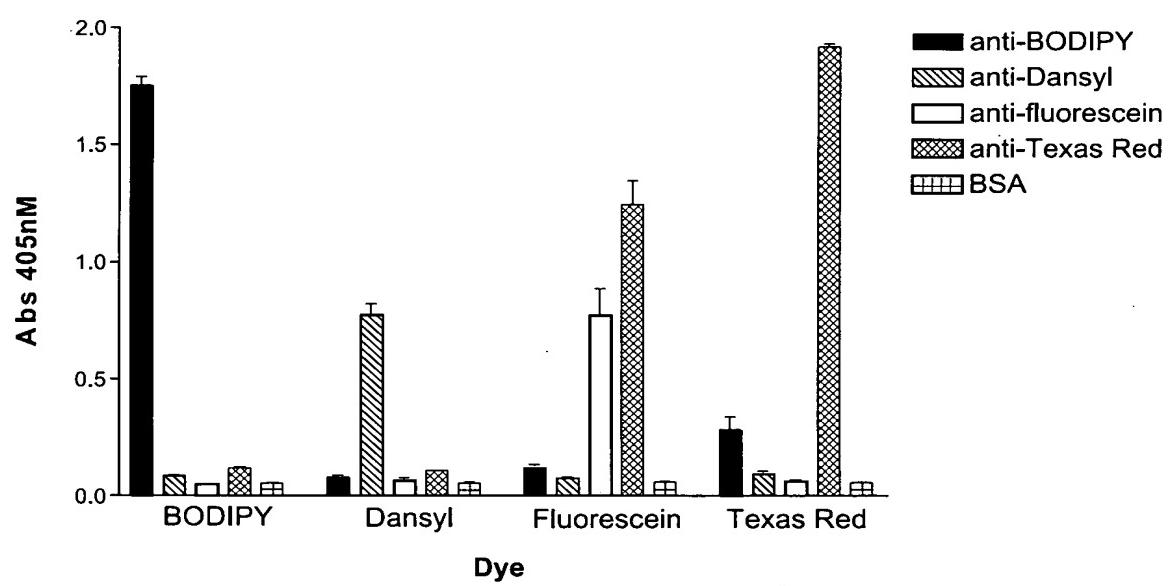


FIG. 22